

# CARYOCOLUM DELPHINATELLA (CONSTANT) SP. REV., A SENIOR SYNONYM OF *C. FIORII* (KLIMESCH) (LEPIDOPTERA: GELECHIIDAE)

Huemer, P., 1991. *Caryocolum delphinatella* (Constant) sp. rev., a senior synonym of *C. fiorii* (Klimesch) (Lepidoptera: Gelechiidae). – Tijdschrift voor Entomologie 134: 31-34, figs. 1-7. [ISSN 0040-7496]. Published 1 July 1991.

*Caryocolum delphinatella* (Constant) is recognized as good species and revocated from synonymy with *C. interalbicella* (Herrich-Schäffer). The female genitalia are described and figured and data on biology are given. *C. fiorii* (Klimesch) is synonymised with *C. delphinatella*.

P. Huemer, Tiroler Landesmuseum Ferdinandeum, Museumstr. 15, A-6020 Innsbruck, Austria.

Key words. – Gelechiidae, *Caryocolum*, synonymy.

In 1890 the well-known French lepidopterist A. Constant described *Lita delphinatella* from a single female collected in July in the Alpes du Dauphiné. Klimesch (1954) in his revision of European species of the former genus *Lita* feeding on Caryophyllaceae, queried *delphinatella* as a synonym of *Caryocolum interalbicella* (Herrich-Schäffer). This synonymisation was accepted by the present author (Huemer 1988) although *delphinatella* was treated as a separate species in the French list (Leraut 1980). *C. fiorii* was described from five males collected in the Abruzzi (Klimesch 1953). Later the species was also recorded from the Swiss and French Alps.

When re-evaluating the original description of *delphinatella*, including the colour plate depicting the holotype, it became clear that this species is not a synonym of *interalbicella* but conspecific with *fiorii*. This assumption is further supported by rich material, including two females, collected in the south-western Alps in July 1990.

## *Caryocolum delphinatella* (Constant) sp. rev.

*Lita delphinatella* Constant, 1890a (May 28): 6, pl. 1, fig. 2 [moth in colour]. Holotype ♀, France: Alpes du Dauphiné, vii [not traced].

*Lita delphinatella* Constant; Meess 1910: 370.

*Phthorimaea delphinatella* (Constant); Meyrick 1925: 95; Gaede 1937: 254; Lhomme [1946]: 632.

*Caryocolum delphinatella* (Constant); Leraut 1980: 79.

*Gnorimoschema fiorii* Klimesch, 1953: 277, figs 23, 24. Lectotype ♂ (Designated by Huemer 1988: 481), Italy:

Abruzzan, Gran Sasso, 25.vii.1935 (Fiori) (coll. Klimesch, Linz) [examined]. Syn. n.  
*Caryocolum fiorii* (Klimesch); Huemer 1988: 480.

## Description

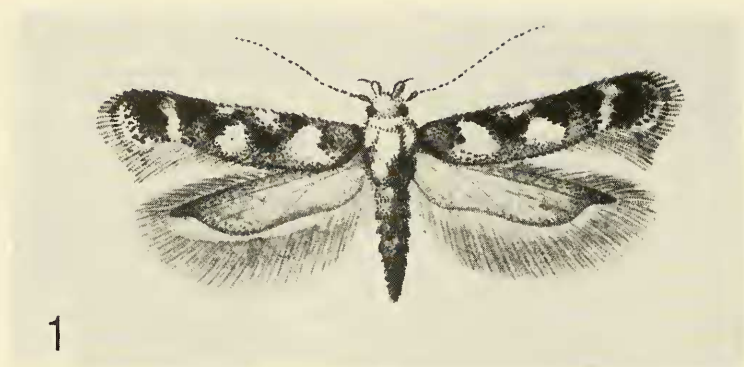
Adult (Figs 1, 3-5). – Fore wing length ♂ 7.0-7.5 mm, ♀ 6.5-7.0 mm. Head white; Labial palpus white, third segment mottled with dark brown. Thorax white, tegulae dark brown basally. Fore wing dark brown, mottled with light brown; white transverse fasciae at one-fifth and one-half, medially narrowed and often reduced towards costa; fasciae fused and mottled with light brown dorsally; separate white subcostal spot at about two-fifth always well developed; white costal and tornal spots at four-quarters variable in extension, separate or fused to fascia; fringes whitish with dark brown basal line. Hind wing light grey.

Male genitalia (Huemer 1988: Fig. 122).

Female genitalia (Figs 6, 7). – Apophyses posteriores 1.60 mm, apophyses anteriores 0.43 mm; eighth segment without processes; ostium bursae surrounded by folds; antrum short, funnel-shaped, posteriorly fused with pair of short lateral sclerotizations of ductus bursae which are level with the tip of the apophyses anteriores; corpus bursae pyriform with long, hook-shaped signum.

## Biology

The immature stages are still unknown. According to personal observations in France the larvae probably feed on *Minuartia* sp. and *Silene* sp. (Ca-



Figs. 1-5. *Caryocolum* spp. – 1, *C. delphinatella*, original figure by Constant; 2, *C. interalbicella*; 3, *C. delphinatella* (*fiorii* lectotype); 4, *C. delphinatella* ♀; 5, *C. delphinatella* ♂.

ryophyllaceae) around which the adults have been collected in numbers in July and early August; most specimens were attracted to artificial light sources. The females examined were both collected during day time resting on rocks. *C. delphinatella* is an alpine species which occurs from about 1600 to 2500 m.

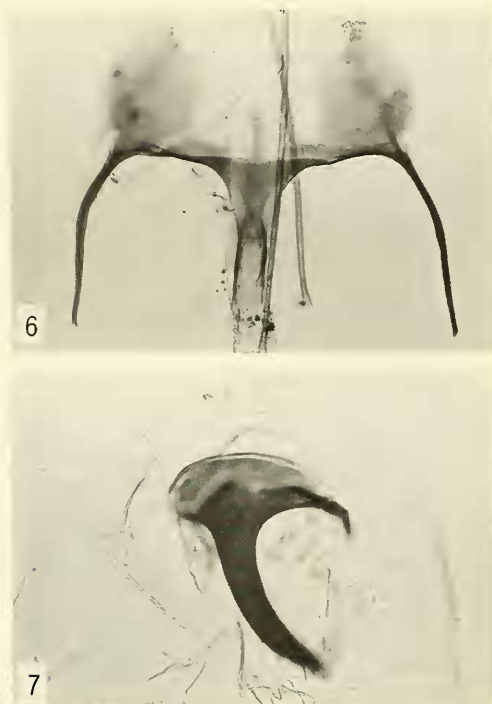
### Distribution

Only known from the Abruzzi and the south-western Alps (Alpes Maritimes, Alpes de Haute Provence, Hautes Alpes, Isère (Dauphiné), Walliser Alpen, Alpi Cozie); according to Lhomme [1946] also in the Pyrénées (Haute-Garonne).

### Remarks

Despite the efforts of several lepidopterists the holotype of *delphinatella* could not be traced in MNHN Paris or any other institution; however, Constant's original description and colour illustration, the latter reproduced here in monochrome (Fig. 1), leave no doubt about the identity of this species. It is well characterized by the pure white head and thorax as emphasised by Constant, and the white subcostal forewing spot at two-fifths (Figs 1,3-5). The synonymisation with *Caryocolum interalbicella* is certainly incorrect as this species has a whitish to cream head and tegulae and a dark brown thorax (Fig. 2). The few French *Caryocolum*-species with white colour of head and thorax differ from *delphinatella*: *C. saginella* (Zeller) is distinctly smaller (4.0-5.0 mm); *C. cauligenella* (Schmid) has a creamy rather than pure white head and thorax and also broader fore wings without the costal spot present in *delphinatella*; French specimens of *C. peregrinella* (Herrich-Schäffer) are characterized by the larger size (7.5-9.0 mm), broader fore wings and extended white markings of the fore wing without separate subcostal spot. *C. leucothoracellum* (Klimesch) has different forewing markings with white subcostal streak and a medial spot. *C. fiorii* perfectly matches *delphinatella* and is here placed as a junior subjective synonym. *C. fiorii* was recently recorded as new to France (Huemer 1989) because the true identity of *delphinatella*, at that time still treated as synonym of *interalbicella*, was not recognized.

The female genitalia of *delphinatella* are similar to those of other species of the *trauniella*-group. The antrum is distinctly longer than in *peregrinella* (Herrich-Schäffer) and *trauniella* (Zeller). The lateral sclerotizations of the ductus bursae are level with the tip of the apophyses anteriores in *delphinatella* whereas in other species of the group they are at most half that length. The differences in the male genitalia have been discussed previously (Huemer 1988).



Figs. 6-7. *Caryocolum delphinatella*, female genitalia. – 6, eighth segment; 7, signum ( $\times 2$  magnification of eighth segment).

Material examined (additional to that previously recorded (Huemer 1988, 1989). – Italy: 4 ♂, Abruzzo, Prov. Rieti, Terminillo-Paß, 18-2000 m, 5-6.viii.1970, leg. Groß; 2 ♂, P. d. Fargno, ob. Bolognola, Mti. Sibillini, 16-1700 m, 14.viii.1970, leg. Groß (Löbbecke Museum, Düsseldorf); 1 ♂, Prov. Torino, Alpi Cozie, Colle delle Finestre, 2150 m, 27.vii.1990, leg. Huemer & Tarmann. France: 39 ♂, 1 ♀, Dep. Alpes-Maritimes, Marguareis W-Hang, Navela, 2100-2200 m, 21-23.vii.1990, leg. Huemer & Tarmann; 22 ♂, 1 ♀, Dep. Alpes-de-Haute-Provence, SW Castel de Restfond, Roche Chevalière, 2480 m, 25.vii.1990, leg. Huemer & Tarmann; 10 ♂, Dep. Alpes-de-Haute-Provence, SW Castel de Restfond, Set. de Caire Brun N-Flanke, 2420 m, 25.vii.1990, leg. Huemer & Tarmann (Tiroler Landesmuseum Ferdinandeum, Innsbruck).

### ACKNOWLEDGEMENTS

I gratefully acknowledge the help received for this study from Mr O. Karsholt (ZMUC, Copenhagen), Dr S. Löser (Düsseldorf), Dr G. Luquet (MNHN, Paris) and Dr K. Sattler (BMNH, London). Furthermore I am indebted to my colleagues M. Kahlen, B. Plössl and Dr G. Tarmann (Innsbruck) for their help in the field and valuable comments.

# REFERENCES

- Constant, A., 1890a. Séance du 26 Juin 1889. – Bulletin de la Société Entomologique de France 1889: 125.
- Constant, A., 1890b. Descriptions de Microlépidoptères nouveaux ou peu connus. – Annales de la Société Entomologique de France 69: 5-16.
- Gaede, M., 1937. Gelechiidae. – Lepidopterorum Catalogus 79: 1-630.
- Huemer, P., 1988. A taxonomic revision of *Caryocolum* (Lepidoptera: Gelechiidae). – Bulletin of the British Museum (Natural History) (Entomology) 57: 439-571.
- Huemer, P., 1989. Bemerkenswerte Funde von *Caryocolum*-Arten aus den Südalpen und dem Mediterraneum (Lepidoptera, Gelechiidae). – Nachrichtenblatt der bayerischen Entomologen 38: 37-40.
- Klimesch, J., 1953-1954. Die an Caryophyllaceen lebenden europäischen *Gnorimoschema* Busck (= *Phthorimaea* Meyr.)-Arten. – Zeitschrift der Wiener Entomologischen Gesellschaft 38: 225-239, 275-282, 311-319, 39: 273-288, 335-341, 357-362.
- Leraut, P., 1980. Liste systématique et synonymique des Lépidoptères de France, Belgique et Corse. – Supplément à Alexanor et au Bulletin de la Société Entomologique de France, 334 pp.
- Lhomme, L., [1946-1948]. Catalogue des Lépidoptères de France et de Belgique 2: 489-648. – Douelle (Lot).
- Meess, A., 1910. xxxviii. Familie. Gelechiidae. – In: Hofmann, E. & A. Spuler (eds). Die Schmetterlinge Europas, 2, 523 pp. – Stuttgart.
- Meyrick, E., 1925. Lepidoptera Heterocera. Fam. Gelechiidae. – Genera Insectorum 184: 1-290, pls 1-5.

Received: 23 November 1990

Accepted: 26 November 1990